INDEX
AND LIST OF TITLES

Fisheries Research Board of Canada
and Associated Publications

1965-1972

Neal M. Carter



Fisheries Research Board of Canada
MISCELLANEOUS SPECIAL PUBLICATION No. 18

Environment Canada Environnement Canada

ABBREVIATIONS USED IN THE INDEX

J – Journal of the Fisheries Research Board of Canada

B – Bulletins of the Fisheries Research Board of Canada

AR – Annual Reports of the Fisheries Research Board of Canada

R – Reviews of the Fisheries Research Board of Canada

CAG – Circulars of the Board's Arctic Biological Station

CAR – Circular of the Board's Office of the Atlantic Regional Director

CCG – Circulars of the Board's Freshwater Institute

CDG – Circular of the Board's Marine Ecology Laboratory, Bedford Institute

CHN – Circulars of the Board's Halifax Laboratory

CJG – Circulars of the Board's Biological Station, St. John's, Newfoundland

CNG – Circulars of the Board's Biological Station, Nanaimo, B.C. (general series)

CNS – Circulars of the Board's Biological Station, Nanaimo, B.C. (statistical series)

CPO – Circulars of the Board's Pacific Oceanographic Group

CSG – Circulars of the Board's Biological Station, St. Andrews, N.B. (general series)

CVG – Circulars of the Board's Vancouver Laboratory

T – Technical Reports of the Board's establishments

MSP – Miscellaneous Special Publications of the Board and its establishments

S – Studies Series

A – Interpretative Articles series

INDEX

AND LIST OF TITLES

FISHERIES RESEARCH BOARD OF CANADA

AND ASSOCIATED PUBLICATIONS

1965-1972

Department of the Environment
Fisheries Research Board of Canada
Office of the Editor, 116 Lisgar Street
Ottawa, Canada
K1A 0H3

Printed By R.B. & W. 08KXKF 708-3-507

MISCELLANEOUS SPECIAL PUBLICATION 18

Index
and List of Titles
Fisheries Research Board of Canada and associated Publications 1965–1972

Neal M. Carter

FISHERIES RESEARCH BOARD OF CANADA
Ottawa 1973

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Ottawa 1973

Contents

PREFACE

This Miscellaneous Special Publication is a subject–author index and list of titles of the Fisheries Research Board of Canada's own publications and of contributions to non-Board publications from members of its staff and other authors associated with the Board or granted use of its facilities. It is an amalgamation of the indexes and lists of titles provided annually during 1965–71 in the December issues of the Board's Journal and also incorporates the indexing and listing of titles for 1972, which, in view of the availability of this present publication in 1973, were not included in the December 1972 issue of the Journal. It continues the purpose of Bulletin No. 164, published in 1968, which comprises a subject–author index and list of titles of corresponding publications for the period 1900–1964.

The following sections of this Preface further describe the contents of this present publication.

I. BOARD PUBLICATIONS LISTED AND INDEXED IN THIS PUBLICATION

1. Journal of the Fisheries Research Board of Canada (Volumes 22–29)

Volume 22 consists of six approximately bimonthly issues; Volumes 23-29 each comprises 12 monthly issues, with format slightly enlarged commencing with Volume 28. Each December issue includes a list of titles in the volume for volume-binding purposes; as mentioned above, the December issues for Volumes 22-28 also include a subject–author index not only to the contents of the volume, but also to the contents of certain other publications that are listed.

The Journal is a continuing series, available by purchase or subscription from Information Canada, Ottawa, Canada.

2. Bulletins of the Fisheries Research Board of Canada (Numbers 149–180)

These are published at irregular intervals. A number of them originally appearing in English have been published later in French without change of issue number. The French editions are listed herein, but are not indexed separately because their subject matter corresponds to that of the English editions, though where reference to a specific page number in the English edition is given the page number in the French edition may be slightly different.

Bulletin No. 155, "Fishes of the Atlantic Coast of Canada", though not published until 1966, was available in page-proof form early enough to include its common and scientific names of fishes in the index portion of Bulletin No. 164 for the purpose of referring earlier nomenclature to the most recent names. Consequently, although the listing and general indexing of Bulletin No. 155 are repeated in this present index, the indexing of the names of the species described is not repeated herein except where required for later references.

For analogous reasons Bulletin No. 180, "Pacific Fishes of Canada", though not published until 1973, was also made available in page-proof early enough to allow its listing and indexing in this present publication in order that the latest nomenclature for the fishes described therein could be used in this index.

The series of Bulletins is continuing, available by purchase from Information Canada, Ottawa, Canada, and from Information Canada bookstores in several Canadian cities.

3. Circulars of the Fisheries Research Board of Canada Establishments

The several series of Circulars published and distributed directly from the various Board establishments at irregular intervals during 1965-1972 are adequately described in their listings on pages 537-541, where their indexing abbreviations, the source from which issues of the different series may be obtained (free), and whether or not they are continuing series, are indicated.

4. Technical Reports of the Fisheries Research Board of Canada Establishments (Numbers 1-336)

The Reports, a new series commenced in 1967, are not strictly considered as "publications", though they may be cited in publications providing their manuscript status is indicated. They are processed and distributed directly from the various Board establishments at irregular intervals for presenting results and data that may eventually appear in published form. Some of the establishments indicate on the title page a subnumbering for their own Reports, but in the present listing and indexing only the consecutive numbering shown on the covers and assigned by the Board's Office of the Editor is used.

The sources from which issues of this continuing series may be obtained (free) are indicated in their listing herein.

5. Miscellaneous Special Publications of the Fisheries Research Board of Canada or its Establishments (Numbers 8–17)

These are occasional leaflets, brochures, or other items of general interest, printed or otherwise processed. Their nature is best indicated by reference to the list of their titles herein. This is a continuing series, available as indicated in their listing.

II. BOARD PUBLICATIONS LISTED BUT NOT INDEXED IN THIS PUBLICATION

6. Annual Reports of the Fisheries Research Board of Canada (1964–1971)

These Reports, each in English and French, vary somewhat from year to year in the extent of their coverage of the Board's organization and activities. That for 1971 includes a list of Members of the Board, the Chairman's Remarks on program goals, some project highlights, changes in organization and facilities, Management Personnel, and a list of establishments and their directors.

Though listed herein, the brevity of their mentions of investigations did not warrant more than a very few references to these Reports in this index.

Copies of this continuing series are available (free) from the Board's Office of the Editor, Ottawa, Canada.

7. Reviews of the Fisheries Research Board of Canada (1964; 1965–1970 biennially)

Following a Review for 1964, subsequent issues have each covered a two-year period (1965–66; 1967–68; 1969–70). The nature of their coverage has varied somewhat from issue to issue. That for 1969–70 includes a synoptic review of the Board's activities during the period, followed by a brief description of many of the investigations conducted by each of its establishments; a list of Board Members and of the professional staff of each establishment; a note on publications and reports; a list of various series of staff publications, and of articles published in the Board's Journal by other than its staff, both arranged alphabetically by name of senior author; and index to the professional staff with indication of the establishment with which they are connected.

Though listed herein, there are few references to these Reviews in the index because by the time these Reviews appear most investigations reviewed have already been reported or published more fully in other publications that are more completely indexed herein.

Copies of this continuing series are available (free) from the Board's Office of the Editor, Ottawa, Canada.

III. NON-BOARD PUBLICATIONS LISTED AND INDEXED IN THIS PUBLICATION

8. Studies (Numbers 886–1729)

These are chiefly accounts of investigations by Board staffs (or investigations financed to some extent by the Board) published in recognized scientific media other than the Board's own publications.

Numbers 886–927 were made available for free distribution as photo-offset reproductions bound as Part 2 of a binding for 1966; reproductions of Numbers 928–1355 were bound semiannually in two parts per year to the end of 1969. Those bindings for Numbers 886–1019 each contain a list of the included numbered articles but leave the reader to find a desired article by its number shown only at the bottom left of the first page of the article; in the bindings for Numbers 1020–1355 the introduction of consecutive pagination at the bottom of the pages greatly facilitates the location of a desired article from the list of contents.

Following discontinuation of the binding for free distribution with Number 1355 in Part 2 for 1969, commencing with the January 1970 issue of the Journal the titles of recently issued Studies in this continuing series are listed immediately following the last article in each Journal issue, with an indication of where a copy of a desired Study may be obtained.

9. Interpretative Articles (Numbers 1-272)

This new series commenced in 1966. The articles are principally by Board scientists and interpret work already published in primary journals. They appear at irregular intervals in various technical publications, and the listing herein shows by key numbers the name and address from which a copy of a desired article in this continuing series may be obtained. Frequently an article essentially duplicates, condenses, or is based on an article in another series; in many such cases this is indicated in the present index references.

(NOTE: There are two series of Board Reports that are neither listed nor indexed in this publication. They are the Manuscript Reports of the Fisheries Research Board of Canada establishments, and the Canadian Oceanographic Data Centre Data Records. The Manuscript Reports are intended primarily for the Board's internal use, are not available for general distribution though they may be consulted at the various establishments, and should not be quoted without permission from the issuing establishment. If cited, their manuscript status must be emphasized. Issue No. 900, dated 1969, is a 255-page index and list of titles of those Manuscript Reports appearing to the end of 1966. The series continues, with listings in the Board's biennial Reviews. The Canadian Oceanographic Data Centre series is also subject to the above restrictions. They are also listed in the biennial Reviews.)

IV. COMPILATION OF THE INDEX IN THIS PUBLICATION

In general, the plan of this index follows that of Bulletin 164 and many of the explanations under the above heading on page xii in the Preface to that Bulletin apply here also. The remarks in the sections below may be helpful in the use of this index.

(a) ***Headings.*** In amalgamating the seven annual indexes for 1965–1971 and adding thereto the indexing of the 1972 series of publications, it frequently became necessary to revise many of the subject headings because of changes in the nature, scope, or emphasis occurring in investigations during the 8-year period. For example, the references to pollution and its effects became so numerous that the heading "Pollution" is herein reserved for general references but now also indicates various other headings, some new, under which references to causes, effects, etc. of certain types of pollution are collected for convenience. Notes have been added to many headings for explanatory purposes or to indicate other cognate headings.

Author headings show the full name if available, otherwise, the fullest name used in the authorship.

As in Bulletin No. 164, references to fishes having generally recognized common names in English are indexed under those names, followed by the scientific name in parentheses. Headings for the scientific names are also included, referring the reader to the common names. For Canadian Atlantic coast marine fishes the names used are those in Board Bulletin No. 155 unless superseded by newer nomenclature given in the 1970 third edition of the American Fisheries Society's Special Publications No. 6, "A List of Common and Scientific Names of Fishes from the United States and Canada". For Canadian Pacific coast marine fishes the names used are those in Board Bulletin No. 180. For Canadian and American freshwater fishes the names used are those in the above-mentioned American Fisheries Society's publication, or in some cases those in Board Bulletin No. 173 or other recent authoritative publications. In many headings for fishes there is a second parenthesis giving recently obsolete scientific names and/or obsolete or local common names sometimes still used by authors. A Board Bulletin that will be published in 1973 extensively describes 181 species of freshwater fishes occurring in Canada. Its nomenclature for these fishes will be used in the 1973 annual index of Board publications, but this information was not available in time for use in this present amalgamated index.

Other aquatic animals such as clams, shrimps, and marine mammals having generally recognized common names in English are similarly indexed unless the common name varies so with locality that it is preferable to index the references under headings for the scientific names or still broader classifications. This is particularly the case with many invertebrates, especially molluscs.

Some common names officially include a geographical adjective such as "Pacific" or "Atlantic" shown in headings such as "Halibut, Pacific" and "Halibut, Atlantic"; but sometimes different species indigenous to different regions have the same common name without any official geographical adjective to distinguish them. In such cases the author has indicated their habitat by showing it in the headings thus: "Clam, razor (Pacific)" and "Clam, razor (Atlantic)".

References to many kinds of aquatic invertebrates having no generally recognized common name in English were adequately indexed in each annual index under a general heading, e.g. Copepoda. However, in this amalgamation of those indexes so many references accumulated under some headings that it was found desirable to reserve such a heading for references of a general nature and to indicate in the heading that subclassifications are indexed under new separate headings.

(b) ***Punctuation used in publication indication for combined references.*** Combined references are indicated thus:

J 27(8): 1712, 1819	(two articles, both in the same volume issue)
J 27(9): 1850, (10): 1907	(two articles, in two issues of same volume)
J 27(9): 1872; 28(5): 792	(two articles, in two different volumes)
B 155: 161, 172	(two references to the subject in the same Bulletin)
B 155; 161; 172	(three references to the subject in those three Bulletins)

(c) ***Wording in parentheses after publication indication in references.*** For brevity, many ungrammatical or laconic expressions are used, some of which require the subject heading being mentally read into them. Author references in the 1965–71 annual indexes were not prepared by the present author, who considered some of the expressions to be almost cryptic; he has in many such cases somewhat amplified them.

(d) ***Nomenclature used in indexing fauna and flora.*** The choice of nomenclature used for fishes and other aquatic animals is described in subsection IV(a) above. For aquatic flora a few species are indexed under their generally recognized common English names, e.g. Dulse; Eelgrass; Irish moss; but most are indexed under either the scientific names used by the author or under wider classifications, e.g. Chlorophyta; Rhodophyta.

(e) ***Degree of detail in indexing fauna and flora.*** For publications dealing principally with a *single* organism it is indexed under its name and as many other subject headings as may be appropriate to cover the objects of the investigation. For publications dealing with comparisons of the biology or utilizations of a *few* organisms, or where a few organisms from among many others mentioned are singled out for particular discussion, those few may also be indexed separately by name, also under other subject headings appropriate for the objects of the investigation as a whole.

Where *many* species are mentioned in long checklists or general surveys of a region's fauna or flora having no generally recognized common names and often involving much synonymy of scientific names, the numerous species may not be indexed individually, but references to the publications will be found under some more or less general headings such as Checklists; Surveys; Fauna; Flora; Fishes, lists of; Fisheries; Flatfishes; Birds; Clams; Invertebrates, lists of; Insects; Phytoplankton; Zooplankton; Algae; Benthos; Feed; Distribution; or under names of the pertinent regions, bodies of water, or nature of the investigation. Exceptions to this generalized indexing are several publications describing in detail and illustrating each species known in a given region, e.g. Board Bulletins 155; 171; 173; 179; 180; each species so described is individually indexed.

The references shown under the heading for a given species are not necessarily all the references to that species; there may be mention of the species in articles indexed under more general headings, particularly taxonomic subclassifications that include that species, as well as under certain headings for the plural of the common name for that group of species, e.g. Whales; Flatfishes; Clams. Such plural-name headings are also used for indexing closely related species not mentioned in a publication by their individual names.

New species described for the first time are individually indexed with an indication that they are new. For convenience they are also referenced under the heading Species, new.

Species mentioned in an author's discussion or review of investigations other than his own are not included in the indexing of that author's publication.

(f) ***Geographical regions and place names.*** Only geographical localities and places where considerable or special investigation has been conducted are accorded a subject heading. Even so, the references under most such headings are not necessarily all the references thereto; additional references may be found associated in a general way with references under other cognate subject headings and in some cases under author headings.

(g) ***Corrections.*** Corrections to which attention has been drawn after publication of the series covered in this publication are from time to time published in the Journal, usually toward the end of the August issues. These corrections are indicated in the affected index references herein by giving the reference to the Journal issue in which the correction appeared. Corrections in the form of errata notices included or inserted in the publication itself are not indicated in this index.

ACKNOWLEDGMENTS

I gratefully acknowledge the advice of Dr J. C. Stevenson, the Board Editor, in the planning of this publication to serve as an adjunct to my Bulletin No. 164 that indexed and listed Board and associated publications for the period 1900–1964, also the assistance of his staff and the various Board establishments in supplying me with copies of the necessary publications for this compilation while at home during my retirement. Also acknowledged is the author indexing prepared in the Office of the Editor for the 1965–1971 annual indexes and which has been incorporated herein with some alterations.

Thanks are also expressed to several Board Directors and members of their staffs to whom I frequently appealed for additional information concerning names of authors, adjudications on nomenclature of organisms, and other details. Dr J. L. Hart, author of Bulletin 180, "Pacific Fishes of Canada", kindly provided an advance list of the nomenclature he would be using for those fishes.

I greatly regret that my wife, who cheerfully assisted me in the compilation, almost to the final stages, did not live to see this work published.

ABBREVIATIONS USED IN THE INDEX

J – Journal of the Fisheries Research Board of Canada
B – Bulletins of the Fisheries Research Board of Canada
AR – Annual Reports of the Fisheries Research Board of Canada
R – Reviews of the Fisheries Research Board of Canada
CAG – Circulars of the Board's Arctic Biological Station
CAR – Circular of the Board's Office of the Atlantic Regional Director
CCG – Circulars of the Board's Freshwater Institute
CDG – Circular of the Board's Marine Ecology Laboratory, Bedford Institute
CHN – Circulars of the Board's Halifax Laboratory
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CPO – Circulars of the Board's Pacific Oceanographic Group
CSG – Circulars of the Board's Biological Station, St. Andrews, N.B. (general series)
CVG – Circulars of the Board's Vancouver Laboratory
T – Technical Reports of the Board's establishments
MSP – Miscellaneous Special Publications of the Board and its establishments
S – Studies Series
A – Interpretative Articles series

The Provinces and Territories of Canada are abbreviated to:

Alta. (Alberta)
B.C. (British Columbia)
Man. (Manitoba)
N.B. (New Brunswick)
Nfld. (Newfoundland)
N.S. (Nova Scotia)
N.W.T. (Northwest Territories)
Ont. (Ontario)
P.E.I. (Prince Edward Island)
Que. (Quebec)
Sask. (Saskatchewan)
Yuk. (Yukon Territory)

Major areas of certain geographical regions (including oceans) are designated by N (north, northern), S (south, southern), E (east, eastern), W (west, western), NE (northeast, northeastern), etc. Other geographical abbreviations are: L. (Lake), R. (River), Atl. (Atlantic, also frequently used to indicate the Canadian Maritime Provinces plus Newfoundland with Labrador, eastern Quebec, and their coasts; also the United States Atlantic seaboard), Pac. (Pacific, also frequently used to indicate British Columbia and its coast, also the United States Pacific seaboard).

Certain other abbreviations often used in references (e.g. DDT, GLC, ICNAF, INPFC, NTA, PCB, TMA) are either explained therein or are shown as headings referring to the complete-wording headings.

In the index references "re" is very frequently used to imply "in relation to", "in connection with", and similar meanings; "vs." to imply such meanings as "in contrast to", "as opposed to", and "as compared with".

KEY TO FISHERIES RESEARCH BOARD OF CANADA ESTABLISHMENTS

The numeral in front of each address corresponds to the numeral shown at the end of titles in some of the listed series of publications in order to indicate from which of the following establishments the publication or report originated, or may be obtained.

(1) Department of the Environment
Fisheries and Marine Service
Pacific Biological Station
P.O. Box 100
Nanaimo, British Columbia

(2) Department of the Environment
Fisheries and Marine Service
Vancouver Laboratory
6640 N.W. Marine Drive
Vancouver 8, British Columbia

(3) Department of the Environment
Fisheries and Marine Service
Pacific Environment Institute
4160 Marine Drive
West Vancouver, British Columbia

(4) Department of the Environment
Fisheries and Marine Service
Freshwater Institute (att'n Library)
501 University Crescent
Winnipeg, Manitoba R3T 2N6

(5) Department of the Environment
Fisheries and Marine Service
Arctic Biological Station
P.O. Box 400
Ste. Anne de Bellevue, Quebec

(6) Department of the Environment
Fisheries and Marine Service
Biological Station
St. Andrews, New Brunswick

(7) Department of the Environment
Fisheries and Marine Service
Marine Ecology Laboratory
Bedford Institute of Oceanography
P.O. Box 1006
Dartmouth, Nova Scotia

(8) Department of the Environment
Fisheries and Marine Service
Halifax Laboratory
1707 Lower Water Street
Halifax, Nova Scotia

(9) Department of the Environment
Fisheries and Marine Service
Newfoundland Biological Station
Water Street East
St. John's, Newfoundland

(10) Department of the Environment
Fisheries and Marine Service
Office of the Editor
116 Lisgar Street
Ottawa, Ontario
K1A 0H3

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B

D

H

M

O

P

Q

R

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J 25(11): 2477 (proteins electropherograms re rockfishes systematics)

Scorpionfish, rainbow (*Scorpaenodes xyris*)
J 25(11): 2477 (muscle protein electropherograms re rockfishes systematics)

Scotian Shelf waters, off Nova Scotia (*see also* Hydrography; Oceanography, Northwest Atlantic coastal)
J 23(8): 1145 (biology of Atl. argentine)
29(5): 507 (herring larvae biology)
(12): 1667 (N sand lance spawning & larval development)
T 86; 157 (cod & haddock catches)
252 (herring larvae ecology & macrozooplankton biomass)
260 (groundfish abundance & other data, 1958–68 surveys)
S 1026 (1964 another cold sea temperature year)
1142 (long-term temperature variations)
1160 (trend-interpreting difficulties in cod & haddock landings from)
1316 (size, age, & recruitment comparisons for haddock)
1640 (vs. SW Nfld. herring biological characteristics)
1642 (recent events in haddock fishery)

Scotland
S 1348 (rare fishes from Clyde sea area)

Scotoplanes (*see* Sea cucumbers)

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J 28(11): 1807 (mobilization of mercury into fish)
29(12): 1685 (mercury concentration re size in several Man. & NW Ont. freshwater fishes; corrections on J 30(8): 1257)

Scott, James Stuart
J 25(9): 1775 (offshore sand lance)
26(4): 879 (trematodes as biological indicators; correction on J 27(8): 1499)
29(12): 1667 (Scotian Shelf northern sand lance eggs & larvae)
(12): 1673 (NW Atl. sand lances morphological & meristic variation)
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T 164 (length re weight of Canadian Atl. marine fishes)
260 (abundance of Scotian Shelf groundfishes)
S 1287 (*Lampritrema nipponicum* from W Atl. argentines)
1354 (rostellar hooks of *Paricterotaenia paradoxa*)
1483 (*Lecithophyllum botryophorum* in *Argentina silus*)
A 143(F) (same as CSG 54 above)
175 (same as CSG 54 above)
182 (reports on researches in ICNAF area, 1969)

Scott, Kenneth Randall
J 26(1): 154 (fish storage facility)
28(8): 1196 (monitoring fish tank oxygen)
29(7): 1071; 1082 (compact recirculation unit for fish rearing & maintenance)
(11): 1641 (efficiency comparison of various aquaria aeration devices)
S 1461 (thermistor readout monitors cold storage)
1473 (portable refrigerated fish holding unit)
A 225 (interview based on S 1473 above)

Scott, Margaret Anne
J 23(7): 1025 (cod muscle lipids)
(10): 1629 (blood lipids of the lobster)

Scott, William Beverley
J 22(5): 1303 (hatchetfish range extension)
23(9): 1457 (longear sunfish in W. Ont.)
25(5): 903 (swordfish feeding habits)
(5): 1075 (*Dasyatis violacea* in NW Atl.)
26(10): 2691 (mesopelagic & other fishes from Canadian Atl.)
27(1): 174 (manefish in Atl. waters off Canada)
29(12): 1679 (expatriate *Myctophum punctatum* lanternfish populations in NW Atl.)
B 155 (full descriptions of Canadian Atl. marine fishes)
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MSP 14 (English & French) (illustrations & popular descriptions of 18 common Canadian Atl. coast fishes)

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S 1345 (retention of marine particles by)

Scrivener, James Charles Edward
J 28(7): 1062 (detecting burrowed lobster)
T 182 (computer programs summarizing ethological data)
235 (agonistic behavior of lobster)
241 (bibliography of economically important shrimps)

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T 261 (bibliography for Gulf of St. Lawrence)

Sculpin, Arctic hookear (*Artediellus uncinatus*)
J 28(7): 935 (occasional component of Passamaquoddy Bay fish communities, N.B.)
T 261 (bibliography for Gulf of St. Lawrence)

Sculpin, Arctic staghorn (*Gymnocanthis tricuspis*)
J 25(12): 2729 (in Nfld. waters)
T 261 (bibliography for Gulf of St. Lawrence)

Sculpin, bigmouth (*Hemitripterus bolini*)
B 180: 505 (full description, etc., B.C.)

Sculpin, blackfin (*Malacocottus kincaidi*)
J 26(9): 2319 (parasites, B.C.)

NOTE re headings commencing with "SEA" – Because some marine organisms have vernacular names commencing with "sea" but variously spelled by different authorities as two words, a single word, or as a hyphenated word, the headings for these are arranged below according to the alphabetical order of the letter that follows "sea", *except* for "Seal", "Seals", and "Seaweeds".

U

W

X

Y

APPENDIX

LIST OF PUBLICATIONS AND TITLES
1965-1972

DEALING WITH WORK OF THE

FISHERIES RESEARCH BOARD OF CANADA

JOURNAL OF THE FISHERIES RESEARCH BOARD OF CANADA

Abbreviation: J

Volume 22 (1965)

No. 1 (*Published January 29, 1965*)

Notes

No. 2 (*Published March, 1965*)

Notes

No. 3 (*Published June 11, 1965*)

Notes

No. 4 (*Published July 14, 1965*)

Notes

No. 5 (*Published September 10, 1965*)

Notes

No. 6 (*Published December 15, 1965*)

Notes

NOTE: Volume 22 consisted of only six issues; commencing with Volume 23 each annual volume has consisted of twelve monthly issues.

Volume 23 (1966)

No. 1 (*Published January 5, 1966*)

Notes

No. 2 (*Published February 4, 1966*)

Notes

No. 3 (*Published March 5, 1966*)

Notes

No. 6 (*Published June 13, 1966*)

Notes

No. 7 (*Published July 8, 1966*)

Notes

No. 8 (*Published August 12, 1966*)

Notes

No. 9 (*Published September 12, 1966*)

Notes

No. 10 (*Published October 28, 1966*)

Notes

No. 11 (*Published December 15, 1966*)

Notes

No. 12 (*Published February 3, 1967*)

Notes

Volume 24 (1967)

No. 1 (*Published March 13, 1967*)

Notes

No. 2 (*Published April 6, 1967*)

Notes

No. 4 (*Published May 23, 1967*)

Notes

No. 5 (*Published June 15, 1967*)

Notes

No. 6 (*Published June 30, 1967*)

Notes

No. 7 (*Published July 14, 1967*)

Notes

No. 8 (*Published August 17, 1967*)

Notes

No. 11 (*Published November 10, 1967*)

Notes

No. 12 (*Published December 22, 1967*)

Volume 25 (1968)

No. 1 (*Published January 12, 1968*)

No. 2 (*Published February 16, 1968*)

Notes

No. 3 (*Published March 8, 1968*)

Notes

No. 7 (*Published July 12, 1968*)

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No. 8 (*Published August 18, 1968*)

Notes

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No. 11 (*Published November 15, 1968*)

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No. 12 (*Published December 31, 1968*)

Notes

Volume 26 (1969)

No. 1 (*Published February 6, 1969*)

Notes

No. 2 (*Published March 7, 1969*)

Notes

No. 3 (*Published March 26, 1969*)

Notes

No. 4 (*Published April 12, 1969*)

No. 5 (*Published May 28, 1969*)

Notes

No. 6 (*Published June 27, 1969*)

Notes

No. 8 (*Published August 25, 1969*)

Notes

No. 9 (*Published September 16, 1969*)

Notes

No. 10 (*Published October 31, 1969*)

Notes

No. 12 (*Published January 12, 1970*)

Notes

Volume 27 (1970)

No. 1 (*Published February 10, 1970*)

Notes

No. 2 (*Published March 13, 1970*)

Notes

No. 3 (*Published April 30, 1970*)

Notes

No. 4 (*Published May 20, 1970*)

Notes

No. 5 (*Published June 5, 1970*)

Notes

No. 6 (*Published June 26, 1970*)

Notes

No. 7 (*Published July 10, 1970*)

Notes

No. 8 (*Published August 21, 1970*)

Notes

No. 9 (*Published September 14, 1970*)

Notes

No. 10 (*Published October 19, 1970*)

Notes

No. 12 (*Published December 30, 1970*)

Notes

Volume 28 (1971)

No. 1 (*Published January 30, 1971*)

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No. 4 (*Published May 3, 1971*)

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No. 5 (*Published June 18, 1971*)

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No. 6 (*Published July 16, 1971*)

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No. 7 (*Published August 20, 1971*)

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No. 8 (*Published September 30, 1971*)

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No. 9 (*Published November 15, 1971*)

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No. 10 (*Published December 15, 1971*)

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No. 11 (*Published January 27, 1972*)

Notes

No. 12 (*Published February 28, 1972*)

Notes

Volume 29 (1972)

No. 1 (*Published March 30, 1972*)

No. 3 (*Published April 21, 1972*)

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No. 4 (*Published April 28, 1972*)

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No. 5 (*Published May 8, 1972*)

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No. 7 (*Published July 7, 1972*)

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No. 9 (*Published September 8, 1972*)

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No. 10 (*Published October 13, 1972*)

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No. 11 (*Published November 3, 1972*)

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No. 12 (*Published December 8, 1972*)

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(A continuing series)

BULLETINS OF THE FISHERIES RESEARCH BOARD OF CANADA

Abbreviation: B

149. FRICK, H. C. 1965. Economic aspects of the Great Lakes fisheries of Ontario. 160 p.
150. TOMLINSON, N. 1966. Greening in tuna and related species. 21 p.
151. LANTZ, A. W. 1966. Special products from freshwater fish. 45 p.
151f. LANTZ, A. W. 1969. Produits spéciaux des poissons d'eau douce. ix + 59 p.
152. GRAINGER, E. H. 1966. Sea stars (Echinodermata: Asteroidea) of arctic North America. 70 p.
153. KETCHEN, K. S., AND C. R. FORRESTER. 1966. Population dynamics of the petrale sole, *Eopsetta jordani*, in waters off western Canada. 195 p.
154. TEMPLEMAN, W. 1966. Marine resources of Newfoundland. 170 p.
155. LEIM, A. H., AND W. B. SCOTT. 1966. Fishes of the Atlantic coast of Canada. 485 p. (Indexed, including names of described fishes, in Bulletin 164.)
155f. LEIM, A. H., AND W. B. SCOTT. 1972. Poissons de la côte atlantique du Canada. 527 p.
156. CREAN, P. B. 1967. Physical oceanography of Dixon Entrance, British Columbia. 66 p.
157. RUTHERFORD, J. B., D. G. WILDER, AND H. C. FRICK. 1967. An economic appraisal of the Canadian lobster fishery. 126 p.
158. SINCLAIR, S., S. TRACHTENBERG, AND M. L. BECKFORD. 1967. Physical and economic organization of the fisheries of the District of Mackenzie, Northwest Territories. 70 p.
159. CARROTHERS, P. J. G. 1967. Automatic underwater photographic equipment for fisheries research. 34 p.
160. ROACH, S. W., H. L. A. TARR, N. TOMLINSON, AND J. S. M. HARRISON. 1967. Chilling and freezing salmon and tuna in refrigerated sea water. 40 p.
161. KENNEDY, W. A., AND W. M. SPRULES. 1967. Goldeye in Canada. 45 p.
162. FOERSTER, R. E. 1968. The sockeye salmon, *Oncorhynchus nerka*. xv + 422 p.
163. CARROTHERS, P. J. G. 1968. Instrumentation for the engineering study of otter trawls. vii + 45 p.
164. CARTER, N. M. 1968. Index and list of titles, Fisheries Research Board of Canada and associated publications, 1900–1964. xviii + 649 p. (French edition of preface available separately.)
165. MCCRIMMON, H. R. 1968. Carp in Canada. ix + 93 p.
165f. MCCRIMMON, H. R. 1972. La carpe au Canada.
166. EALES, J. G. 1968. The eel fisheries of eastern Canada. x + 79 p.
166f. EALES, J. G. 1972. La pêche de l'anguille dans l'est du Canada.
167. STRICKLAND, J. D. H., AND T. R. PARSONS. 1968. A practical handbook of seawater analysis. xi + 311 p. (Revised and reprinted 1972.)
168. QUAYLE, D. B. 1969. Paralytic shellfish poisoning in British Columbia. x + 68 p.
169. QUAYLE, D. B. 1969. Pacific oyster culture in British Columbia. xii + 192 p.
170. SÆTHER, O. A. 1969. Some Nearctic Podonominae, Diamesinae, and Orthocladiinae (Diptera: Chironomidae). ix + 154 p.
171. PIKE, G. C., AND I. B. MACASKIE. 1969. Marine mammals of British Columbia. ix + 54 p.
172. BIGG, M. A. 1969. The harbour seal in British Columbia. viii + 33 p.
173. MCPHAIL, J. D., AND C. C. LINDSEY. 1970. Freshwater fishes of northwestern Canada and Alaska. x + 381 p.
174. SÆTHER, O. A. 1970. Nearctic and Palaearctic *Chaoborus* (Diptera: Chaoboridae). ix + 57 p.
175. MORSE, N. H. 1971. An economic study of the oyster fishery of the Maritime Provinces. viii + 81 p.
176. SHIH, C.-T., A. J. G. FIGUEIRA, AND E. H. GRAINGER. 1971. A synopsis of Canadian marine zooplankton. viii + 264 p.
177. PRAKASH, A., J. C. MEDCOF, AND A. D. TENNANT. 1971. Paralytic shellfish poisoning in eastern Canada. viii + 88 p.
178. QUAYLE, D. B. 1971. Pacific oyster raft culture in British Columbia. vi + 34 p.
179. QUAYLE, D. B., AND N. BOURNE. 1972. The clam fisheries of British Columbia. vii + 70 p.
180. HART, J. L. 1973. Pacific fishes of Canada. xii + 740 p.

(A continuing series)

Post-1964 Reprints, Revisions, and Translations of Pre-1965 Bulletins

(Indexed in Bulletin 164)

68. Clemens, W. A., and G. V. Wilby. 1946. Fishes of the Pacific coast of Canada. 443 p. (Reprinted without revision.)
119. Ricker, W. E. 1958. Handbook of computations for biological statistics of fish populations. 300 p. (Reprinted with corrections 1963; reprinted without revision 1968.)
122. Strickland, J. D. H. 1960. Measuring the production of marine phytoplankton. 172 p. (Reprinted 1972)
125. Strickland, J. D. H., and T. R. Parsons. 1960. A manual of sea water analysis with special reference to the more common micronutrients and to particulate organic material. 203 p. (2nd ed., revised 1965.)*

*Revisions necessitated some new indexing in this bulletin.

131. Medcof, J. C. 1961. Oyster farming in the Maritimes. 158 p. (Reprinted without revision.)

131f. Medcof, J. C. L'ostréiculture dans les provinces Maritimes. xi + 178 p.

137. Mansfield, A. W. 1963. Seals of arctic and eastern Canada. 35 p. (2nd ed., revised 1967.)

140f. Templeman, W. 1963. Répartition des requins dans l'Atlantique canadien (et plus particulièrement dans les eaux de Terre-Neuve). 83 p. (English edition published in 1963.)

147f. McLeese, D. W., and D. G. Wilder. 1967. Le homard: entreposage et expédition. 75 p. (English edition published in 1964.)

148. Bell, G. R. 1964. A guide to the properties, characteristics, and uses of some general anaesthetics for fish. 9 p. (2nd ed., revised.)

ANNUAL REPORTS OF THE FISHERIES RESEARCH BOARD OF CANADA

(*Note: The contents of these Reports are not indexed in the Index portion of this Bulletin.*)

AR 1964. Annual Report Fisheries Research Board of Canada 1964. 24 p. (combined English and French)

1965. Annual Report Fisheries Research Board of Canada 1965. 36 p. (combined English and French)

1966. Annual Report Fisheries Research Board of Canada 1966. 26 p. (combined English and French)

1967. Annual Report Fisheries Research Board of Canada 1967. 36 p. (combined English and French)

1968. Annual Report Fisheries Research Board of Canada 1968. 35 p. (combined English and French)

1969. Annual Report Fisheries Research Board of Canada 1969. 40 p. (combined English and French)

1970. Annual Report Fisheries Research Board of Canada 1970. 52 p. (combined English and French)

1971. Annual Report Fisheries Research Board of Canada 1971. 47 p. (combined English and French)

(A continuing series)

REVIEWS OF THE FISHERIES RESEARCH BOARD OF CANADA

(*Note: The contents of these Reviews are not indexed in the Index portion of this Bulletin.*)

R 1964. Review of the Fisheries Research Board of Canada 1964. 103 p.

1965/66. Review of the Fisheries Research Board of Canada 1965–66. 148 p.

1967/68. Review of the Fisheries Research Board of Canada 1967–68. 155 p.

1969/70. Review of the Fisheries Research Board of Canada 1969–70. 237 p.

(A continuing series)

CIRCULARS
OF THE FISHERIES RESEARCH BOARD OF CANADA

ARCTIC BIOLOGICAL STATION

P.O. Box 400, Ste. Anne de Bellevue, Qué.

Abbreviation: CAG

9. SERGEANT, D. E. 1966. Populations of large whale species in the western North Atlantic with special reference to the fin whale. 30 p.

(A continuing series)

OFFICE OF THE ATLANTIC REGIONAL DIRECTOR, RESEARCH

1 Sackville Place, P.O. Box 159, Halifax, N.S.

Abbreviation: CAR

1. JANGAARD, P. M. 1970. The role played by the Fisheries Research Board of Canada in the "red" herring phosphorus pollution crisis in Placentia Bay, Newfoundland. 20 p.

(A continuing series)

FRESHWATER INSTITUTE

510 University Crescent, Winnipeg, Man. R3T 2N6.

(formerly the Biological Station, London, Ontario; relocated in Winnipeg in 1966 as the Freshwater Institute)

Abbreviation: CCG

7. 43 p., September 1965.
   BOGOSLOWSKI, A. S. The keeping qualities of fish sausages and wieners, p. 1-8.
   LAWLER, G. H. Whitefish improvement — pike control, p. 9-15.
   UTHE, J. F. A new method of identifying various species of fish, p. 16-20.
   TIBBLES, J. J. Preparation for the advance of sea lamprey control from Lake Superior into the lower Great Lakes, p. 21-26.
   LANTZ, A. W. A method for chilling bulk quantities of freshwater smelt, p. 27-32.
   LANTZ, A. W. Air blast freezers for freshwater fish, p. 38-40.
   Literature for the fishing industry, p. 41-43.

(A continuing series)

MARINE ECOLOGY LABORATORY, BEDFORD INSTITUTE

P.O. Box 1006, Dartmouth, N.S.

Abbreviation: CDG

1. THOMAS, M. L. H. 1968. Control of eelgrass using 2,4-D in oyster-growing areas. 4 p. (Also listed as Interpretative Article No. 109)

(A continuing series)

HALIFAX LABORATORY

(NEW SERIES)

P.O. Box 429, Halifax, N.S.

Abbreviation: CHN

20. ODENSE, P. H., C. W. SHINNERS, AND T. C. LEUNG. 1965. Report to the fishing industry on the identification of fresh and frozen fillets of cod, haddock, and other species. 2 p.
21. STEWART, J. E., AND H. E. POWER. 1965. A unit suitable for holding and displaying live lobsters. 6 p.
22. JANGAARD, P. M. 1965. A note to the fishing industry and general public on sulphide discoloration ("smut") in canned fishery products. 1 p.
23. POWER, H. E., AND M. L. MORTON 1965. A note to the industry on superchilled storage of cod. 2 p.
24. WOOD, A. L. 1965. A note to the industry on freeze-drying. 2 p.
25. ACKMAN, R. G. 1965. The "blackberry" or "black feed" odour problem. 2 p.
26. JANGAARD, P. M. 1965. Salt water fish farming. 1 p.
27. CASTELL, C. H. 1966. Gain and loss in the weight of fillets during processing and storage. 5 p.
28. JANGAARD, P. M. 1966. The care and treatment of seal pelts. 2 p.
29. JANGAARD, P. M. 1967. Fish meal plants in eastern Canada. 5 p.
30. KAMRA, S. K. 1967. A report to the fishing industry on the problem of discolored flesh in gillnet turbot (Greenland halibut). 3 p.
31. JANGAARD, P. M. 1967. Frozen storage of whole lobsters. 2 p.

32. Jangaard, P. M., and A. Saito. 1968. Japanese frozen minced fish (fish paste) products. 2 p.
33. Jangaard, P. M. 1968. Suggestions for handling shrimp caught off the Atlantic coast of Canada. 2 p.
34. Jangaard, P. M. 1968. The Maine shrimp industry, March, 1968. 3 p.
35. Wood, A. L., and L. W. Regier. 1969. Freezing time and weight loss for fillets and bite-size pieces in air blast at −17°F. 2 p.
36. Saito, A., and L. W. Regier. 1970. Determination of total carotenoid pigments in trout and salmon flesh. 3 p.
37. Sipos, J. C., R. G. Ackman, and R. F. Addison. 1970. Recognition of Bunker oils by thin-layer chromatography. 6 p.
38. Castell, C. H. 1970. Current status of the TMA test as a measure of spoilage in fish. 5 p.
39. Dambergs, N., and L. W. Regier. 1970. Method for extraction and colorimetric determination of isopropanol in fish protein concentrates. 5 p.
40. Stewart, J. E., and J. W. Cornick. 1970. Red crab, *Geryon quinquedens*: 1) recommended live storage temperatures; 2) resistance to gaffkemia, the lobster disease. 2 p.
41. Stewart, J. E., and J. W. Cornick. 1970. Disease among stored lobsters (gaffkemia). 5 p.
42. Cornick, J. W., and J. E. Stewart. 1970. Disinfection procedures for the control of blood disease (gaffkemia) in lobster storage facilities. 3 p.
43. Stewart, J. E. 1972. The detection of *Gaffkya homari*, the bacterium pathogenic to lobsters (Genus *Homarus*). 5 p.

(A continuing series)

ST. JOHN'S BIOLOGICAL STATION

St. John's, Nfld.

Abbreviation: CJG

12. Hodder, V. M. [ed.] [various authors.] 1965. Fishery investigations and groundfish landings — Newfoundland, 1964. 28 p.
13. Fleming, A. M. [ed.] [various authors.] 1966. Fishery investigations and groundfish landings in Newfoundland, 1965. 57 p.
14. Fleming, A. M. [ed.] [various authors.] 1967. Fishery investigations and groundfish landings in Newfoundland, 1966. 47 p.
15. Fleming, A. M. [ed.] [various authors.] 1968. Fishery investigations and groundfish landings in Newfoundland, 1967. 44 p.
16. Fleming, A. M. [ed.] [various authors.] 1969. Fishery investigations and groundfish landings in Newfoundland, 1968. 35 p.
17. Pippy, J. H. C. 1970. Illustrated keys to the metazoan parasites of the Salmonidae of insular Newfoundland. 20 p.
18. Hodder, V. M. 1970. Recent developments in the Newfoundland herring fishery, p. 1–19.
    Winters, G. H. 1970. Preliminary results of herring tagging in southwest Newfoundland coastal waters, p. 20–24.
    Parsons, L. S. 1970. Herring investigations in northeast Newfoundland and Labrador, p. 25–28.

(A continuing series)

NANAIMO BIOLOGICAL STATION

(GENERAL SERIES)

P. O. Drawer 100, Nanaimo B.C.

Abbreviation: CNG

73. Thomson, J. A. 1965. Results of exploratory fishing for groundfish in Hecate Strait in 1965. 37 p.
74. Outram, D. N. 1966. 1965 herring spawn deposition in the coastal waters of British Columbia. 8 p.
75. Quayle, D. B. 1966. Paralytic shellfish poisoning — safe shellfish. 9 p.
76. Heritage, G. D., and T. H. Butler. 1967. Shrimp exploration in Hecate Strait and Queen Charlotte Sound, June to August 1966. 39 p.
77. Outram, D. N. 1966. Herring spawn abundance in British Columbia 1966. 17 p.
78. Ketchen, K. S. 1967. A review of the trawl fishery for Pacific cod with a forecast for 1967. 22 p.
79. Ketchen, K. S. 1967. Recent developments in the domestic and foreign fisheries for groundfish in the northeastern Pacific. 13 p.
80. Taylor, F. H. C., and W. P. Wickett. 1967. Recent changes in abundance of British Columbia herring, and future prospects. 17 p.
81. Bourne, N. 1967. A new method for digging butter clams. 9 p.
82. Thomson, J. A. 1967. Results of exploratory fishing for groundfish in Hecate Strait in 1966. 34 p.
83. Outram, D. N. 1967. Herring spawn production in British Columbia in 1967. 8 p.
84. LeBrasseur, R., and J. Fulton. 1967. A guide to zooplankton of the northeastern Pacific Ocean. 34 p.
85. Smith, M. S., and T. H. Butler. 1968. Shrimp exploration on the British Columbia coast 1967. 41 p.
86. Outram, D. N. 1968. The 1968 herring spawn deposition in the coastal waters of British Columbia. 9 p.
87. Yates, A. N. 1968. Experimental prawn trap fishing December 1, 1967, to March 22, 1968. 29 p.
88. Outram, D., and C. Haegele. 1969. The time and extent of herring spawning along the British Columbia coast in 1969. 15 p.
89. Brett, J. R., and D. B. Sutherland. 1970. Improvement in the artificial rearing of sockeye salmon by environmental control. 14 p.

90. GODFREY, H. 1971. Production of chinook and coho salmon by United States hatcheries. 31 p.
91. NARVER, D. W., AND F. C. WITHLER. 1971. Age and size of steelhead trout (*Salmo gairdneri*) in anglers' catches from Vancouver Island, British Columbia, streams. 26 p.
92. WITHLER, F. C. 1972. Research needs for intensive management of British Columbia steelhead. 41 p.

(A continuing series)

NANAIMO BIOLOGICAL STATION

(STATISTICAL SERIES)

P.O. Drawer 100, Nanaimo, B.C.

Abbreviation: CNS

14. THOMSON, J. A., E. J. R. LIPPA, AND D. M. HOLMBERG 1965. British Columbia landings of trawl-caught groundfish by month, by major and minor statistical area; and total hours of effort by month, by major area. Vol. 13, 1964. 75 p.
15. LEBRASSEUR, R. J. 1965 Stomach contents of salmonids caught in the northeastern Pacific Ocean – 1958. Vol. 1, 1965.
16. BILTON, H. T., D. W. JENKINSON, E. W. STOLZENBERG, S. A. M. LUDWIG, AND M. M. AARTS. 1965. Age composition of 1964 British Columbia sockeye, chum, and pink salmon catches. 125 p.
17. FORRESTER, C. R. 1966. Length and age composition of petrale sole (*Eopsetta jordani*) in western Canadian waters. I. Lower west coast of Vancouver Island (P.M.F.C. Area 3C). 44 p.
18. FORRESTER, C. R. 1966. Length and age composition of rock sole (*Lepidopsetta bilineata*) in Western Canadian waters. I. Butterworth-Warrior area of Hecate Strait (P.M.F.C. Area 5D). 40 p.
19. THOMSON, J. A., AND D. M. HOLMBERG. 1966. British Columbia landings of trawl-caught groundfish by month, by major and minor statistical area; and total hours of effort by month, by major area. Vol. 14, 1965. 66 p.
20. LEBRASSEUR, R. J., AND D. A. DOIDGE. 1966. Stomach contents of salmonids caught in the northeastern Pacific Ocean – 1956 & 1957. Vol. 2, 1966. 27 p.
21. LEBRASSEUR, R. J., AND D. A. DOIDGE. 1966. Stomach contents of salmonids caught in the northeastern Pacific Ocean – 1959 & 1960. Vol. 3, 1966. 68 p.
22. LEBRASSEUR, R. J., AND D. A. DOIDGE. 1966. Stomach contents of salmonids caught in the northeastern Pacific Ocean – 1962. Vol. 4, 1966. 81 p.
23. LEBRASSEUR, R. J., AND D. A. DOIDGE. 1966. Stomach contents of salmonids caught in the northeastern Pacific Ocean – 1963 & 1964. Vol. 5, 1966. 47 p.
24. FORRESTER, C. R., AND B. M. SUZUKIcomp. 1966. An inventory of market samples of groundfish landed at British Columbia ports, 1946–1965. 46 p.
25. BILTON, H. T., E. A. R. BALL, AND D. W. JENKINSON. 1967. Age, size, and sex composition of British Columbia sockeye salmon catches from 1912 to 1963. 4 p. + 163 tables.
26. BILTON, H. T., E. A. R. BALL, AND D. W. JENKINSON. 1967. Age, size, and sex composition of British Columbia chum salmon catches from 1957 to 1963. 2 p. + 192 tables.
27. BILTON, H. T., D. W. JENKINSON, E. W. STOLZENBERG, AND M. M. AARTS. 1966. Age composition of 1965 British Columbia sockeye, chum, and pink salmon catches. 121 p.
28. FORRESTER, C. R. 1967. Trawl production by Canadian and United States vessels from grounds adjacent to British Columbia during the years 1954 to 1965, inclusive. 26 p. + 12 tables.

(A continuing series)

PACIFIC ENVIRONMENT INSTITUTE

4160 Marine Drive, West Vancouver, B.C.

Abbreviation: CPO

1965-1. STANLEY-JONES, A. R., AND K. STEPHENS. 1965. Modifications to salinometers in use at P.O.G. 6 p.
1965-2. HOLLISTER, H. J. 1965. Surface seawater temperatures along the British Columbia coast in 1964. 9 p.
1965-3. ANON. 1965. Cruise report: *Ehkoli*, March 1-21. 5 p.
1965-4. HOLLISTER, H. J. 1965. Seawater salinities at British Columbia coastal stations during 1964. 12 p.
1965-5. ANON. 1965. Cruise report: *Ehkoli*, April 5-14. 6 p.
1965-6. WICKETT, W. P. 1965. Coho commercial troll catches in Area 14, the northwestern portion of the Gulf of Georgia. 6 p.
1965-7. ANON. 1965. Cruise report: *Whitethroat*, July 19-31. 6 p.
1965-8. ANON. 1965. Cruise report: *Whitethroat*, Aug. 23-Sept. 3. 9 p.
1965-9. ANON. 1965. Cruise report: *Whitethroat*, Oct. 4-22. 5 p., 3 fig.
1965-10. ANON. 1965. Measurements associated with salmon stomachs. 5 p., 2 fig.

(A discontinued series)

ST. ANDREWS BIOLOGICAL STATION

(GENERAL SERIES)

St. Andrews, N.B.

Abbreviation: CSG

44. MOUSETTE, M., F. D. MCCRACKEN, AND A. MARCOTTE 1965. Distribution of cod catches by commercial vessels in the Gulf of St. Lawrence 1960–1962. 15 p.
45. WILDER, D. G. 1965. Wanted – alive not dead! A message to lobster fishermen. 7 p.
46. KOHLER, A. C. 1965. Changes in the southern Gulf of St. Lawrence cod fishery. 2 p.
47. TIBBO, S. N., AND W. B. SCOTT. 1965. Canadian Atlantic sharks. 4 p.
48. DRINNAN, R. E., AND L. A. ENGLAND. 1965. Further progress in rehabilitating oyster stocks. 4 p.
49. SCOTT, W. B., AND S. N. TIBBO. 1965. Unusual pelagic fishes of the northwest Atlantic. 5 p.
50. WILDER, D. G. 1966. Canadian Atlantic crab resources. 4 p.
51. DRINNAN, R. E., AND J. P. PARKINSON. 1967. Progress in Canadian oyster hatchery development. 4 p.
52. THOMAS, M. L. H. 1968. Anti-fouling coatings for boats. 3 p.
53. THOMAS, M. L. H. 1968. Test new treatment to protect wood from marine borers. 5 p.
54. SCOTT, J. S. 1969. Under-exploited groundfish on the Nova Scotia banks. 3 p.
55. TIBBO, S. N. 1970. Herring – the 'Golden Goose' of the sea. 5 p.
56. [Not yet issued]
57. CARROTHERS, P. J. G., AND T. J. FOULKES. 1972. Trawl measurements – How Canadian east coast otter trawls behave. 11 p.

(A continuing series)

(*Note: This Station's Statistical Series of Circulars was discontinued with issue No. 9 in 1957; the nine issues were indexed and listed in FRB Bulletin No. 164.*)

VANCOUVER LABORATORY

6640 N.W. Marine Drive, Vancouver, B.C.

Abbreviation: CVG

34. MARCH, B. E., JACOB BIELY, H. L. A. TARR, AND F. G. CLAGGETT. 1965. Favourable effect of antioxidants on metabolizable energy and protein value of British Columbia herring meal. 9 p.
35. CLAGGETT, F. G. 1965. Control of spontaneous heating in British Columbia herring meals. 20 p.
36. CLAGGETT F. G. 1966. The effectiveness of some antioxidants in controlling spontaneous heating in British Columbia herring meal. 11 p.
37. CLAGGETT, F. G. 1966. The preservation of summer herring aboard the fishing vessel. 15 p.
38. CLAGGETT, F. G., AND J. WONG. 1968. Salmon canning waste-water clarification. Part I. Flotation by total flow pressurization. 9 p.
39. CLAGGETT, F. G. 1968. Fish meal pilot plant for research. 3 p.
40. CLAGGETT, F. G. 1968. The use and application of antioxidants for control of spontaneous heating in Canadian herring meal. 14 p.
41. TOMLINSON, N., D. E. KRAMER, S. E. GEIGER, AND S. W. ROACH. 1969. Weight changes in some species of Pacific coast fish while stored at sea in refrigerated sea water or in ice. 26 p.
42. CLAGGETT, F. G., AND J. WONG. 1969. Salmon canning waste-water clarification. Part II. A comparison of various arrangements for flotation and some observations concerning sedimentation and herring pump water clarification. 25 p.
43. TOMLINSON, N., D. E. KRAMER, S. E. GEIGER, S. W. ROACH, AND J. H. MANN. 1969. Storage of Pacific salmon at sea. 1. Influence of delay in chilling the catch on quality of the canned product. 15 p.
44. TOMLINSON, N., D. E. KRAMER, S. E. GEIGER, AND S. W. ROACH. 1969. Storage of Pacific salmon at sea. 2. Influence of delay in chilling the catch and of the method of chilling (ice or refrigerated sea water) on the yield at various steps in the handling, storage, and canning of sockeye salmon (*Oncorhynchus nerka*). 12 p.
45. TOMLINSON, N., D. E. KRAMER, S. E. GEIGER, AND S. W. ROACH. 1969. Weight changes in Pacific cod and halibut stored in ice at sea. Influence of the amount of ice used. 12 p.
46. CLAGGETT, F. G. 1970. A compact deodorizer for fishmeal plant flame driers. 8 p.

(A continuing series)

TECHNICAL REPORTS OF THE FISHERIES RESEARCH BOARD OF CANADA

Abbreviation: T

(*Note: The numeral in parentheses at the end of each reference indicates the name of the Fisheries Research Board of Canada establishment from which the Report originated and to which request for a copy can be made. See page vi for addresses corresponding to these numerals.*)

1. BUTLER, T. H. 1967. A bibliography of the Dungeness crab, *Cancer magister* Dana. 12 p. (1)
2. BERNARD F. 1967. Prodrome for a distributional check-list and bibliography of the recent marine Mollusca of the west coast of Canada. 261 p. (1)
3. THOMAS, M. L. H., AND M. J. PARKS. 1967. A biotic survey of Oozy Creek, a small arm of Bideford River, Prince Edward Island. 15 p. + 4 tables + 3 fig. (6)
4. FORSYTHE, M. G. 1967. Analysis of the 1965 smolt run in the northwest Miramichi River, New Brunswick. 73 p. (6)
5. STODDARD, J. H. 1967. Studies of the condition (fatness) of herring. 7 p. + 4 tables + 5 fig. (6)
6. ELSON, P. F., AND J. R. MACDONALD. 1967. Methods for evaluating damage, by New Brunswick forest spraying programs, to salmon fisheries. 33 p. + 6 tables + 6 fig. (6)
7. HOLMBERG, D. 1967. Catch and effort statistics of the British Columbia trawl fishery in 1966. 87 p. (1)
8. [NEVER ISSUED]
9. SYMONS, P. E. K. 1967. Retention of Pletcher grow-thru tags applied to young salmon. 6 p. + 2 fig. (6)
10. COBURN, A. S., AND H. T. BILTON. 1967. The age, size, and sex composition of sockeye in the escapements to Schulbuckhand and Williams creeks, Lakelse Lake, B.C., in 1965 and 1966. 19 p. (1)
11. TAYLOR, F. H. C. 1967. Midwater trawl catches from Queen Charlotte Sound and the open ocean adjacent to the Queen Charlotte Islands. 44 p. (1)
12. KETCHEN, K. S., AND D. M. HOLMBERG. 1967. Catch statistics of the Canadian and United States trawl fishery for Pacific cod (*Gadus macrocephalus*), 1935–65. 23 p. (1)
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(A continuing series)

INTERPRETIVE ARTICLES OF THE FISHERIES RESEARCH BOARD OF CANADA

Abbreviation: A

(*Note: The numeral in parentheses at the end of each reference indicates the name of the Fisheries Research Board of Canada establishment from which the information or the Report originated and to which request for a copy can be made. See page vi for addresses corresponding to these numerals.*)

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J – Journal of the Fisheries Research Board of Canada

B – Bulletins of the Fisheries Research Board of Canada

AR – Annual Reports of the Fisheries Research Board of Canada

R – Reviews of the Fisheries Research Board of Canada

CAG – Circulars of the Board's Arctic Biological Station

CAR – Circular of the Board's Office of the Atlantic Regional Director

CCG – Circulars of the Board's Freshwater Institute

CDG – Circular of the Board's Marine Ecology Laboratory, Bedford Institute

CHN – Circulars of the Board's Halifax Laboratory

CJG – Circulars of the Board's Biological Station, St. John's, Newfoundland

CNG – Circulars of the Board's Biological Station, Nanaimo, B.C. (general series)

CNS – Circulars of the Board's Biological Station, Nanaimo, B.C. (statistical series)

CPO – Circulars of the Board's Pacific Oceanographic Group

CSG – Circulars of the Board's Biological Station, St. Andrews, N.B. (general series)

CVG – Circulars of the Board's Vancouver Laboratory

T – Technical Reports of the Board's establishments

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